YEAR-ROUND DECORATIVE LIGHTS WITH TIME-MULTIPLEXED ILLUMINATION OF INTERLEAVED SETS OF COLOR-CONTROLLABLE LEDS

ABSTRACT OF THE DISCLOSURE

A decorative lighting apparatus provides user-selectable color schemes corresponding to several holidays and other occasions for year-round use. In one illustrative example, the decorative lighting apparatus includes control circuitry which has a plurality of color-control outputs for coupling to color-control terminals of each one of a plurality of color-controllable lights along a decorative light strand. The control circuitry is operative to illuminate the color-controllable lights with any given color scheme by repeatedly time-multiplexing color-control signals at the color-control outputs to different interleaved sets of color-controllable lights along the decorative light strand. Each color-controllable light is a Red-Green-Blue (RGB) Light-Emitting Diode (LED). Preferably, the time-multiplexing rate is sufficient such that the RGB LEDs appear to be simultaneously illuminated along the strand (e.g. 32 Hertz or greater). Advantageously, this low-cost implementation reduces the number of wires required along the decorative light strand without sacrificing versatility.